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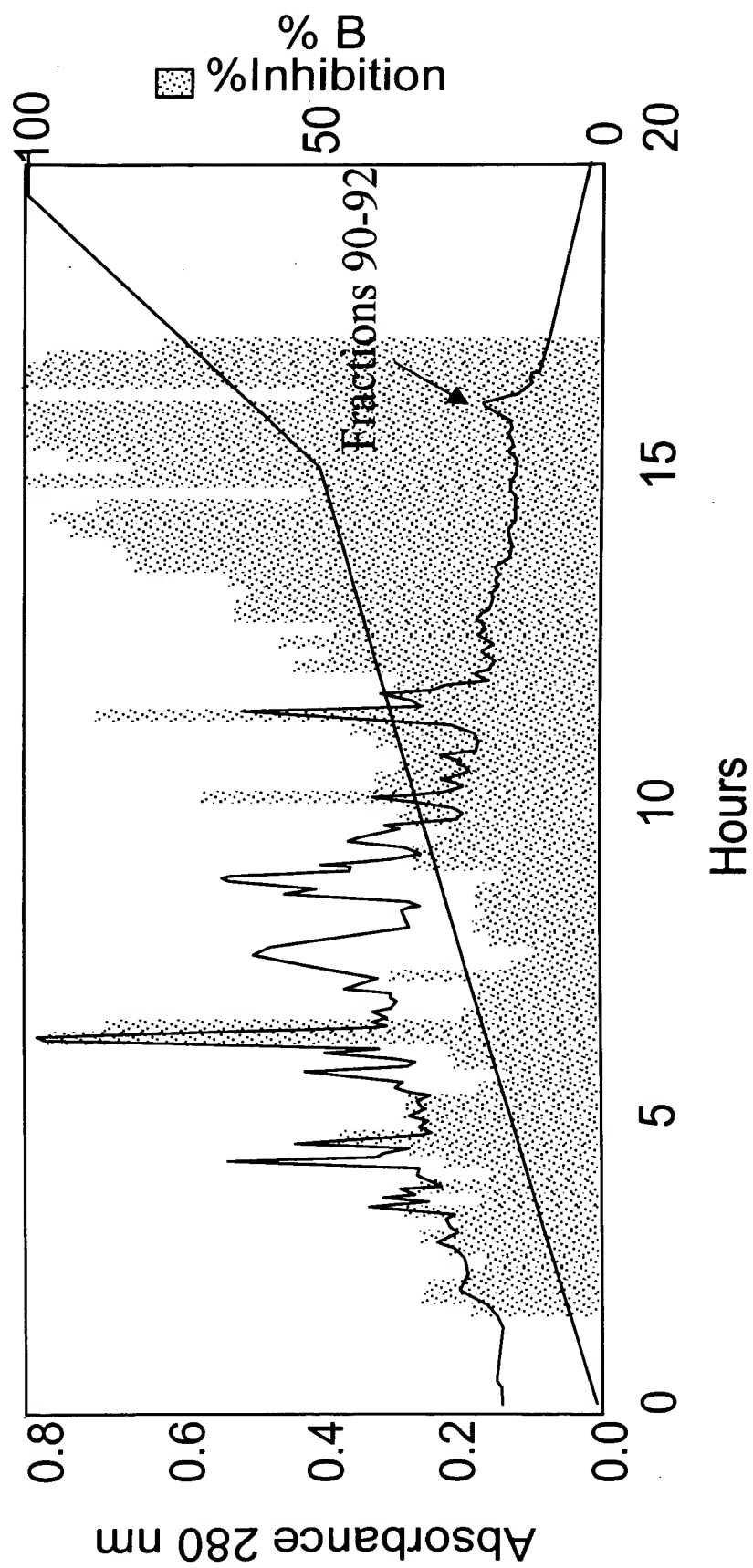


Fig. 1

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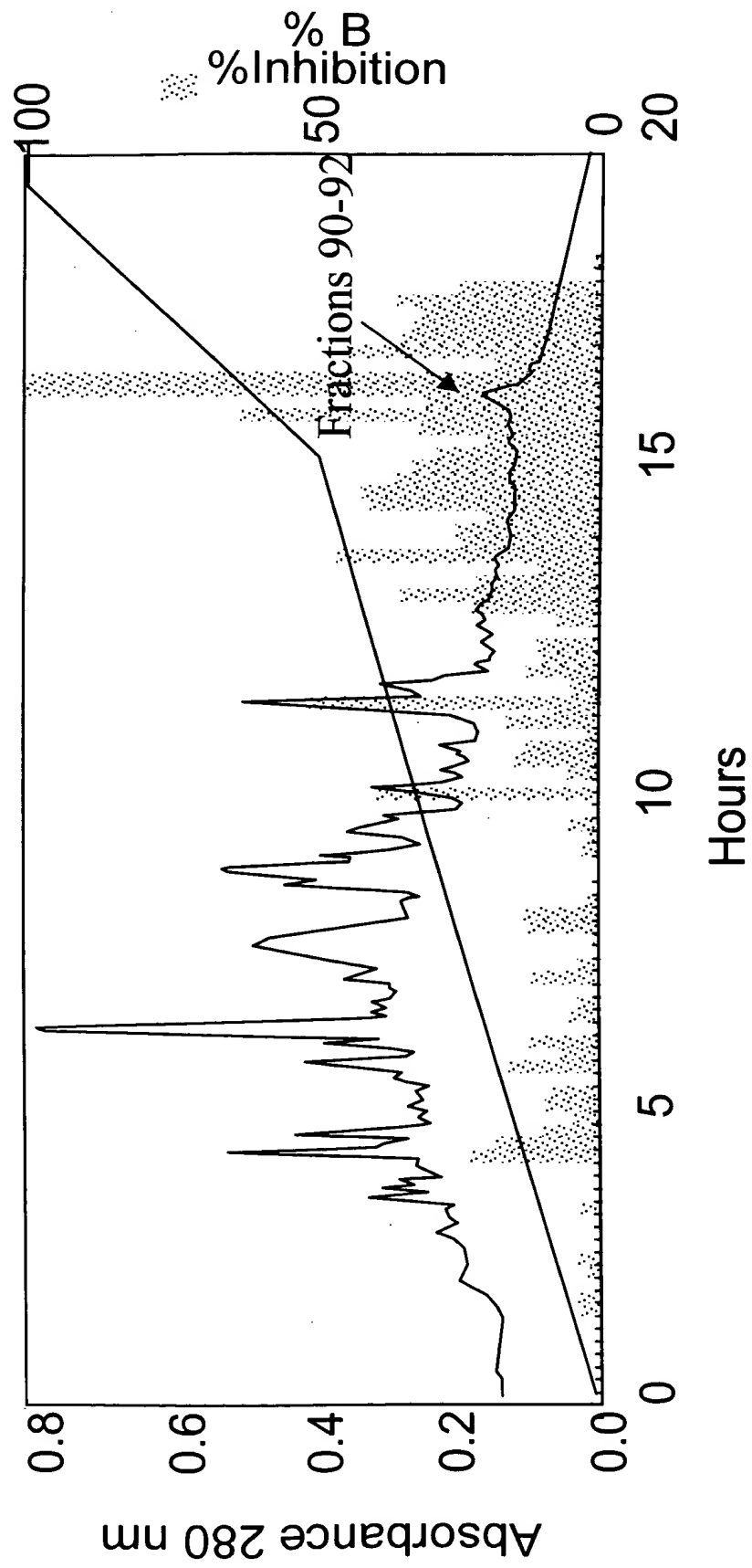


Fig. 2

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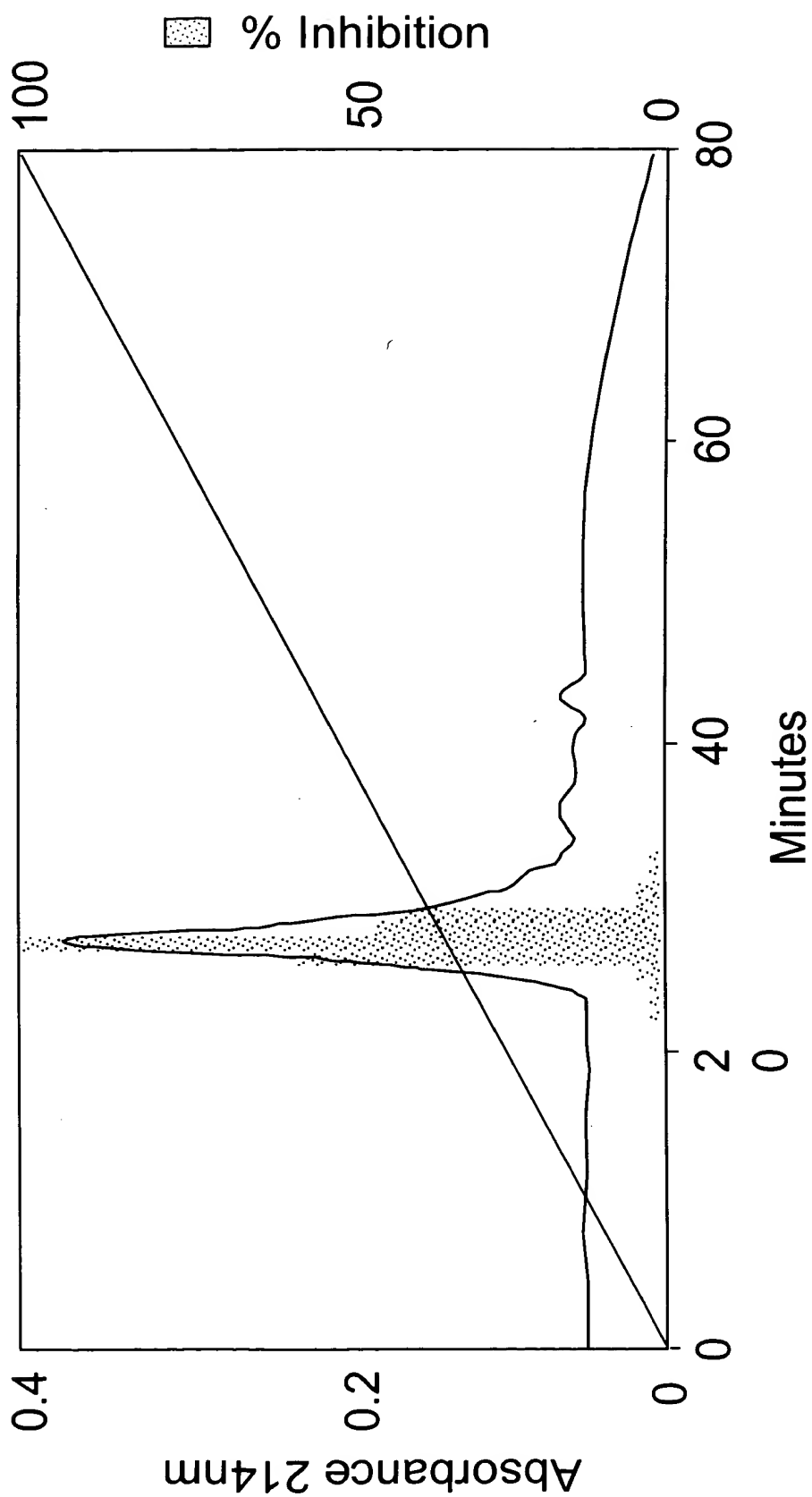



Fig. 3

Mi2a	1	SEFDRQEECKRQCMQLE-TSG-QMRRCVSQCD	32
Mi2b	1	NQEDPQTECQQCQRRCRQOE-SGPRQQQYCORRCK	34
Mi2c	1	NRQDPQQQYECCQKHCCORRE-TEPRHMQTCQQRCE	35
Mi2d	1	KRDPQQREYEDCRRRCRQOE--PRQHQCCQLRCR	32
Cocoa-a	1	YERDPRQQYECCQRRCESEA-TEEREQECCQRCE	34
Cocoa-b	1	LQRQYQQCCQGRCCQEQQ-QGQREQQCCQRKCW	30
Cotton-a	1	GDDDPKRYEDCRRRCCEWDT-RGQKEQQCCESCK	34
Cotton-b	1	PEDPQRRYEECCQECRQOE--ERQQPQCCQQRCL	31
Cotton-c	1	SQRQFQECQQHCHQOE-QRPEKKQQCVRECR	30
maize glb1_0 fr	1	EDDNHHHGHGKSGRCVRRCEDR--PWHQRPRCLEQCCR	36
barley glob fra	1	HDDEDDRRGGHSLQQCVQRCRQER--PRYSHARCQVECR	37
Peanut-a	1	TENP--CAQRCLQSCQOE--PDDLKQKACESRCT	30
alpha conglycin	1	ENP--KHNKCLQSCNSER--DSYRNQACHARC	29
SsAMP1 partial	1	VKEDHQFETRGEILECYRLCQQQ	23
SsAMP2 partial	1	QKHSQILGCYLYXCQQQL	17
SsAMP3 partial	1	LDPIRQQQLCQMRCCQQEKD-PRQQQQCK	28

Fig. 4

Mi2a	33 KR F EEDIDWSKYD	45
Mi2b	35 EI C EEEEYY	43
Mi2c	36 RRYEKEKRKQKRYEEQQREDEEEKYEERMK EEDN	69
Mi2d	33 EQQRQHGRGGDMNPNPQRGSGRY EEGEEEQS	63
Cocoa-a	35 REYKEQQRQQ EEE	47
Cocoa-b	31 EQYKEQERGEHENYHNHKKNR SEEEEGQQR	60
Cotton-a	35 SQYGEKDQQQRHR	47
Cotton-b	32 KR F EQEQQQ	40
Cotton-c	31 EKYQENPWRGER	42
maize glb1	37 EEREKRQERSRHEADRSGE SS	60
barley glob	38 DDQQQHGRHEQEEEQGRGRGWHGEGE REE	66
Peanut-a	31 KLEYDPRC VYD TGATNQRHPPGERT--RGRQP	60
alpha conglycin	30 LLKVEKEE C EEGEI P RRPRRPQH P ER	55
SsAMP1 partial	23	23
SsAMP2 partial	17	17
SsAMP3 partial	28	28

Fig. 4 (continued)

AACTCTAGAG	CGGCCGCGTC	GACTATTTT	ACAACAATTA	CCAACAACAA	CAAACAACAA	60
ACAACATTAC	AATTACTATT	TACAATTACA	GGATCCACAA	CAATGGCTTG	GTTCCACGTT	120
				M A W	F H V>	
						
TCTGTTTGTA	ACGCTGTTTT	CGTTGTTATT	ATTATTATTA	TGCTTCTTAT	GTTTCGTTCCCT	180
S V C	N A V F	V V I	I I I	M L L M	F V P>	
GTTGTTAGAG	GTAGACAAAG	AGATCCTCAA	CAACAATACG	AGCAATGTCA	AAAGAGGTGT	210
V V R	G R Q R	D P Q	Q Q Y	E Q C Q	K R C>	
CAAAGGAGAG	AGACTGAGCC	TAGACACATG	CAAATTTGTC	AGCAAAGGTG	TGAAAGGAGG	240
Q R R	E T E P	R H M	Q I C	Q Q R C	E R R>	
TACGAGAAGG	AGAAGAGGAA	GCAACAAAAG	AGGTGAGGAT	CCGTCGACGC	GGCCGCAGAT	270
Y E K	E K R K	Q Q K	R *			
CTAGACAA	278					

5. 6. 7.

Mi clone 1	1	MAINTSNLCSLFLLSL-FLLSTTVSLAE-----SEFDRQEYEE	38
Mi clone 2	1	MAINTSNLCSLFLLSL-FLLSTTVSLAE-----SEFDRQEYEE	38
Mi clone 3	0		0
cotton vicilin	1	MVRNKSACVVLLFSLFLSFGLLCSAKDFPGRRGDD-----	35
cocoa vicilin	1	MVISKSPFIVLIFSLLLSFALLCSGVSA YGRKQYER-----	36
		*. . * * * * * . . .	
Mi clone 1	39	CKRQCMQLETSQMRRRCVSQCDKRFEEDIDWSKYDNQEDPQTECQ	83
Mi clone 2	39	CKRQCMQLETSQMRRRCVSQCDKRFEEDIDWSKYDNQdDPQTECQ	83
Mi clone 3	42	QCMQLETSQMRRRCVSQCDKRFEEDIDWSKYDNQEDPQTECQ	83
cotton vicilin	36	-----DPPKRYE	42
cocoa vicilin	37	-----DPRQQYE	43
		**	
		.	
Mi clone 1	84	QCQRRCRQQESGPRQQQYQCQRRCKEICEEEEEYNRQR--DPQQQY	126
Mi clone 2	84	QCQRRCRQQESGPRQQQYQCQRRCKEICEEEEEYNRQR--DPQQQY	126
Mi clone 3	84	QCQRRCRQQESdPRQQQYQCQRRCKEICEEEEEYNRQR--DPQQQY	126
cotton vicilin	43	DCRRRCCEWDTRGQKEQQQCEESCKSQYGEKDQQQRHRPEDPQRRY	87
cocoa vicilin	44	QCQRRCESEATEEREQEQQCEQRCEREYKEQQRQQ---EEEELQRQY	85
		*** . . . * . . . *	

Fig. 6

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Mi clone 1      127 EQCQKhCQRRETEPRHMQTCCQRCERRYEKEKRKQCKRYEEQQRE 171
Mi clone 2      127 EQCQeRCQRhETEPHMQTCQRCERRYEKEKRKQCKRYEEQQRE 171
Mi clone 3      127 EQCQKRCCQRRETEPRHMQICQRCERRYEKEKRKQCKRYEEQQRE 171
cotton vicilin  88 EECQQECRQEE--RQQPQCQQRCLKRFEQEQQ----- 118
cocoa vicilin  86 QQCGRCQEQQGQREQQCCQCKWEQY-KEQ----- 116
      .. ** * . . . * ** . . . * . .
Mi clone 1      172 DEEKYEERMKEEDNKRDPPQREYEDCRRRCEQQE--PRQHQCCQ1 214
Mi clone 2      172 DEEKYEERMKEEDNKRDPPQREYEDCRRRCEQQE--PRQYQCQR 214
Mi clone 3      172 DEEKYEERMKEgDNKRDPPQREYEDCRRhCEQQE--PRlQYCCQR 214
cotton vicilin  119 -----QSRQFQECQCHQEQEQRPEKKQCCVR 146
cocoa vicilin  117 ----- 116

Mi clone 1      215 RCREQQRQHGRGGdmNPQRGSGRYEEGEEeQSDNPYF-DERS 258
Mi clone 2      215 RCREQQRQHGRGGDLiNPQRGSGRYEEGEEKQSDNPYF-DERS 258
Mi clone 3      215 RCqEQQRQHGRGGDLMPQRGSGRYEEGEEKQSDNPYF-DERS 258
cotton vicilin  147 ECREKY--QENPWRGEREEEEAEETEEGEGEQESHNPFFH-HRRS 188
cocoa vicilin  117 -----ER-GEHENYHNHKKNRSEEEEGGQQNNNPYFPKRRS 151
      ** * . . . * ** . . . * **

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Fig. 6 (continued)


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Mi clone 1      259 LSTRFRTEEGHISVLENFYGRSKLLRALKNYRLVLLLEANPNAFVL 303
Mi clone 2      259 LSTRFRTEEGHISVLENFYGRSKLLRALKNYRLVLLLEANPNAFVL 303
Mi clone 3      259 LSTRFRTEEGHISVLENFYGRSKLLRALKNYRLVLLLEANPNAFVL 303
cotton vicilin 189 FQSRFREEHGNFRVLQRFASRHPILRGINEFRLSILEANPNTFVL 233
cocoa vicilin  152 FQTRFRDEEGNFKILQRFaENSPPLKGINDYRLAMFEANPNTFIL 196
      *** * * * . * . * . * . * . * . * . * . * . *
      . * * * * . * . * . * . * . * . * . * . * . *

Mi clone 1      304 PTHLDADAILLVIGGRGALKMIHhDNRESYNLECGDVIRIPAGTT 348
Mi clone 2      304 PTHLDADAILLVTGGRGALKMIHRDNRESYNLECGDVIRIPAGTT 348
Mi clone 3      304 PTHLDADAILLVIGGRGALKMIHRDNRESYNLECGDVIRIPAGTT 348
cotton vicilin 234 PHHCDAEKIYLVTNNGRGTLTFLTHENKESYNIVPGVVVKVPAGST 278
cocoa vicilin  197 PHHCDAEAIYFVTNGKGTITFVTHENKESYNVQRGTVVSVVPAGST 241
      * * * * . * * . * . * . * . * . * . * . * . *
      * * * * . * * . * . * . * . * . * . * . * . *

Mi clone 1      349 FYLINRDNNERLHIAKFLQTISTPGQYKEFFPAGGQNPEPYLSTF 393
Mi clone 2      349 FYLINRDNNERLHIAKFLQTISTPGQYKEFFPAGGQNPEPYLSTF 393
Mi clone 3      349 FYLINRDNNERLHIAKFLQTISTPGQYKEFFPAGGQNPEPYLSTF 393
cotton vicilin 279 VYLANQDNKEKLI IAVLHRPVNPNPGQFEFFPAGSQRPQSYLRAF 323
cocoa vicilin  242 VYVVSQDNQEKLTIAVLALPVNSPGKYELFFPAGNNKPESYYGAF 286
      * . . * * * * * . * . . * . . . * . . . * . . * . *
      * . . * * * * * . * . . * . . . * . . . * . . *

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Fig. 6 (continued)

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Mi clone 1      394 SKEILLEAALNTQTEkLRGVf----GQORE-GVIIRASQEQIRELT 433
Mi clone 2      394 SKEILLEAALNTQaERLRGVL----GQORE-GVIIISASQEQIRELT 433
Mi clone 3      394 SKEILLEAALNTQTERLRGVL----GQORE-GVIIRASQEQIRELT 433
cotton vicilin 324 SREILLEPAFNTRSEQLDLFGGRQSRRRQCGG-MFRKASQEQIR 367
cocoa vicilin  287 SYEVLETVFNTQREKLEEILEEQRGQKRQCGQGMFRKAKPEQIR 331
* * * * *      * * * * *      * * * * *      * * * * *
Mi clone 1      434 RDDSESRhWHIRRGESSRGPYNLFNKRPLYSNKYGQAYEVKPED 478
Mi clone 2      434 RDDSESRWHIRRGESSRGPYNLFNKRPLYSNKYGQAYEVKPED 478
Mi clone 3      434 RDDSESRWHIRRGESSRGPYNLFNKRPLYSNKYGQAYEVKPED 478
cotton vicilin 368 ALSQEATSPREK-SGE--RFAFNLLSQTPRYSNQNGRFFEACPPE 409
cocoa vicilin  332 AISQQATSPRHR-GGE--RLAINLLSQSPVYSNQNNGRFFEACPED 373
. . . . .      * * * * *      * * * * *      * * * * *
Mi clone 1      479 YRQLQDMDlSVFIANvTQGSMMGPFFFNTRSTKVVVVASGEADVEM 523
Mi clone 2      479 YRQLQDMDVSVFIANITQGSMMGPFFFNTRSTKVVVVASGEADVEM 523
Mi clone 3      479 YRQLQDMDVSVFIANITQGSMMGPFFFNTRSTKVVVVASGEADVEM 523
cotton vicilin 410 FRQLRDINVTVSALQLNQGSIFVPHYNSKATFVILVTEGNGYAEM 454
cocoa vicilin  374 FSQFQNMDVAVSAFKLNQGAIFVPHYNSKATFVVFVTDGYGQAQM 418
. * . . . *      . * * * *      * * * * *      * * * * *

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Fig. 6 (continued)

Mi clone 1	524	ACPHLSGRHGGGGKRRHEEEED	-----VHYEQVRARLSKREAI	563
Mi clone 2	524	ACPHLSGRHGGGrGGKRRHEEEED	-----VHYEQVRARLSKREAI	563
Mi clone 3	524	ACPHLSGRHGGGGKRRHEEEEE	-----VHYEQVRARLSKREAI	563
cotton vicilin	455	VSPHLPRQSSYEHEEEEDDEEEEQ	EEERRSGQYRKIRSLRSGD	499
cocoa vicilin	419	ACPHLSRQSQSGSRQDRREEQ	EEEEETFGFEQQVKAPLSPGD	463

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Mi clone 1	564	--VLAGHPVFVSSGNENLLFAFGINAQNNHEN-----FLAGR	600
Mi clone 2	564	--VpVGHPVFVSSGNENLLFAFGINAQNNHEN-----FLAGR	600
Mi clone 3	564	--VLAGHPVFVSSGNENLLFAFGINAQNNHEN-----FLAGR	600
cotton vicilin	500	IFVVPANFPVTFVASQNQNLRMTGTGFLYNQINPDHNQRIFVAGK	544
cocoa vicilin	464	VFVAPAGHAVTFFASKDQPLNAVAFGLNAAQN----NQRIFLAGR	503

[illegible]

Mi clone 1	601	ERNVLQQIEPQAMELAFAPRKEVEE s FNSQ-DqSIFFPGRQHQQ	645
Mi clone 2	601	ERNVLQQIEPQAMELAFAPRKEVEELFNSQ-DESIFFPGPRQHQQ	645
Mi clone 3	601	ERNVLQQIEPQAMELAFAA s RKEVEELFNSQ-DESIFFPGPRQHQQ	645
cotton vicili	545	INHVRQ-WDSQAKELAFGVSSRLVDEIFNSNPQES-YF-VSRQRQR	587
cocoa vicilin	504	-----PFFLNHKQNTN	514

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Fig. 6 (continued)

Mi clone 1	646	QSPRSTKQQQPLVSILDFVGF	666
Mi clone 2	646	QSSRSTKQQQPLVSILDFVGF	666
Mi clone 3	646	QSPRSTKQQQPLVSILDFVGF	666
cotton vicilin	588	ASE	590
cocoa vicilin	515	VIKFTVKASAY	525

Fig. 6 (continued)

	1	10	20	30	40	47
MiAMP2c						
	<u>RQRDPQQQYE</u>	<u>QCQKRCQRRE</u>	<u>TEPRHMQICQ</u>	<u>QRCERRYEKE</u>	<u>KRKQQR</u>	
Gibrat method	CCCCCCCCCH	HHECCCCCCC	CCCCCCEEEC	CCCCCCHHH	HHHHHHH	
Levin method	CCCCCHCCHH	HHHHHHCHHT	HCSCCCECC	CHHTTHHHH	HHHHCHH	
DPM method	CCCCCCCCCH	HHHHHHHHH	CHCCCHHEEH	HHHHHHHHH	HHHHHCC	
SOPMA method	CCCCCHHHH	HHHHHEECCC	CCCCHHEEEE	EHHHHHHHH	HHHHHHH	
PhD method	CCCCHHHHH	HHHHHHHHH	CCCCCHHHH	HHHHHHHHH	HHHHCCC	
Consensus	<u>CCCCCHCCHH</u>	<u>HHHHH-HH-</u>	<u>CCCC--EE-</u>	<u>-HHHHHHHH</u>	<u>HHHHHHH</u>	

Fig. 7

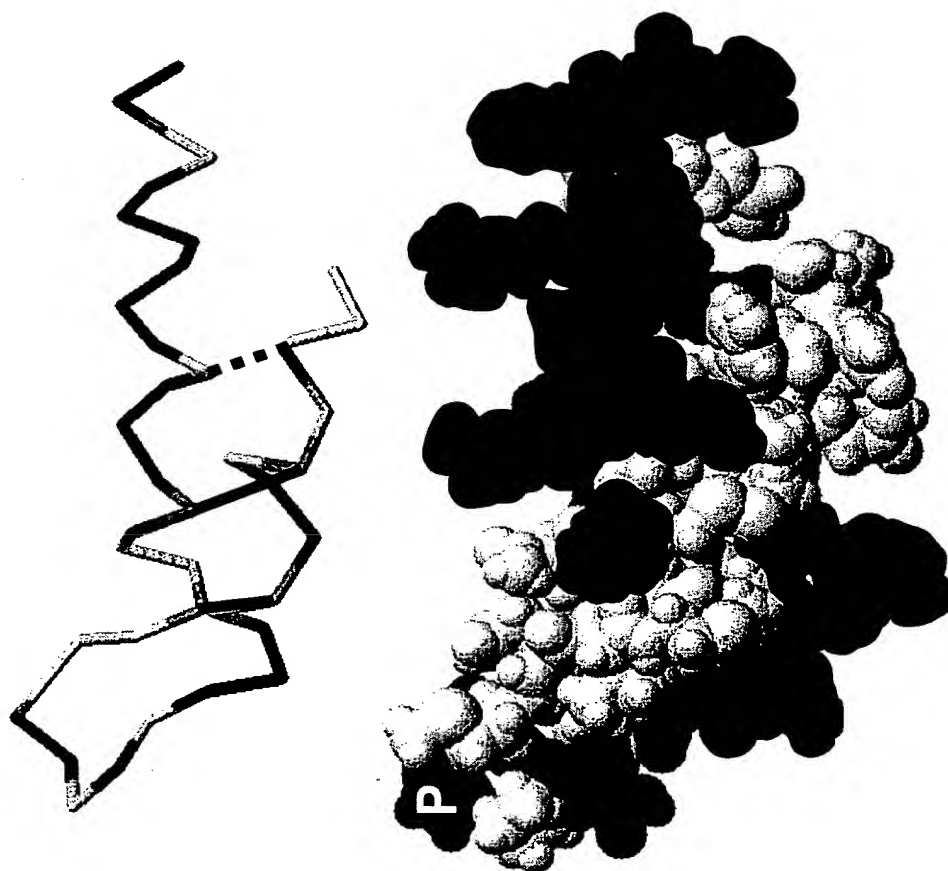


Fig. 8

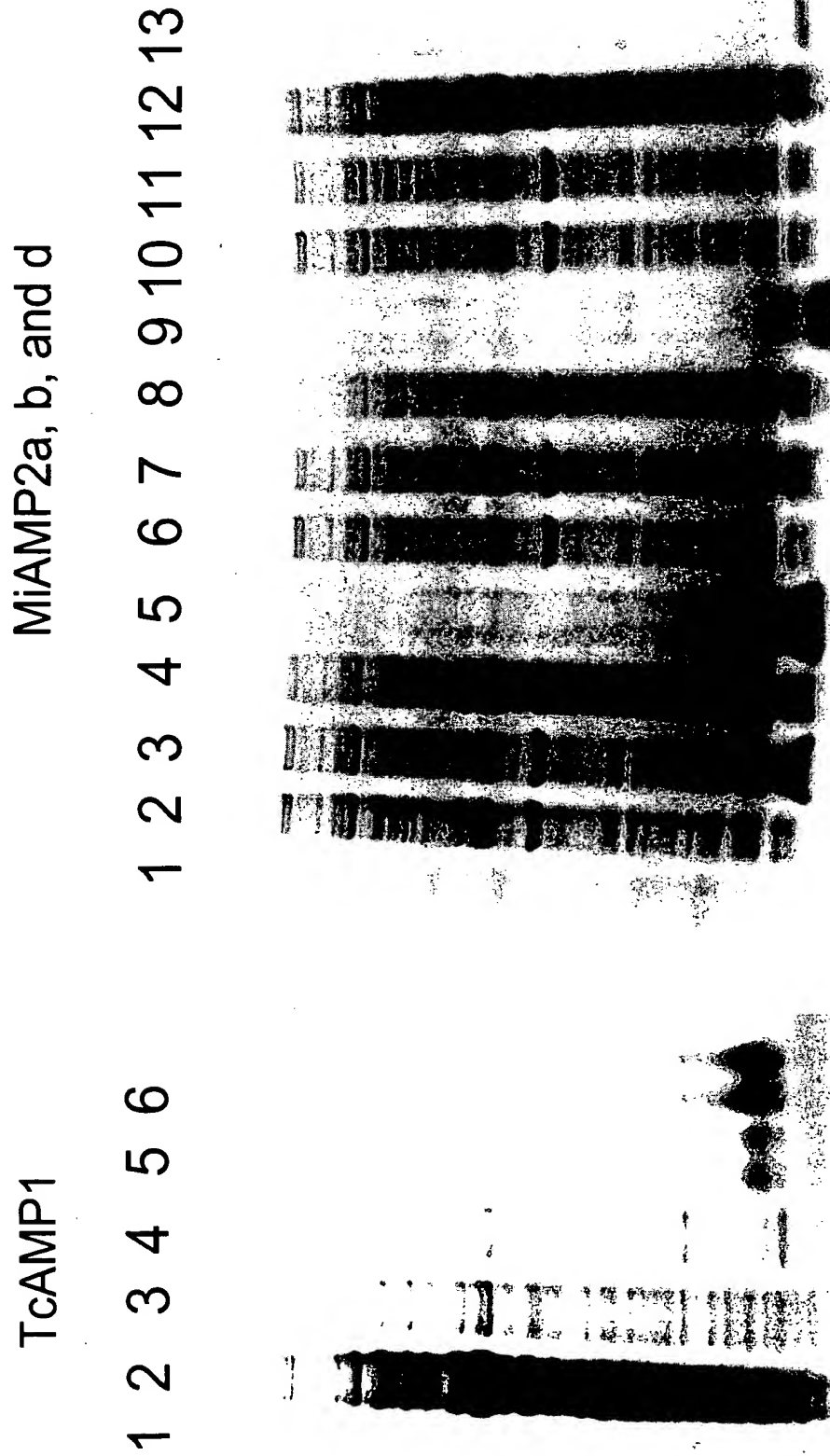


Fig. 9

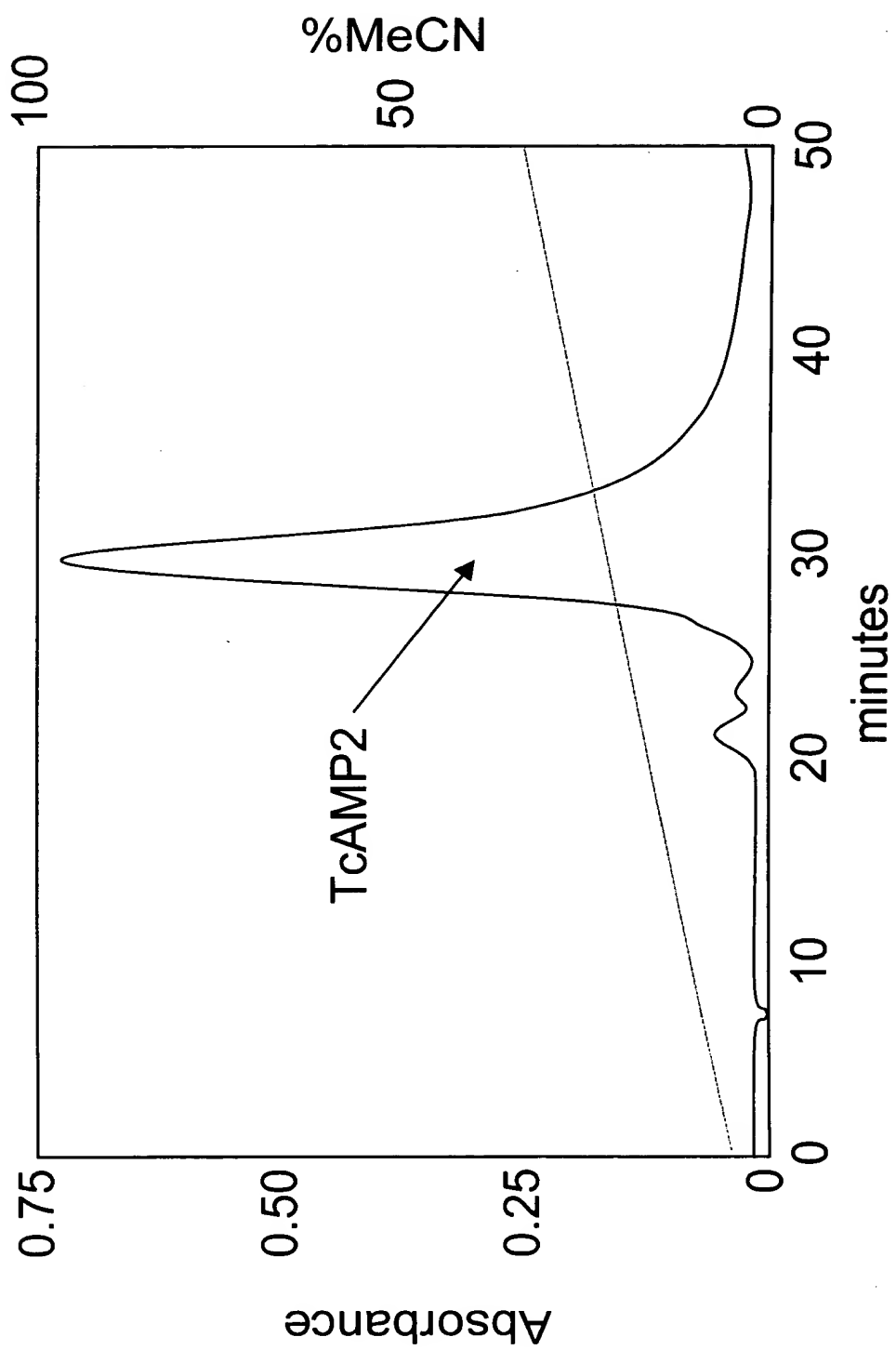
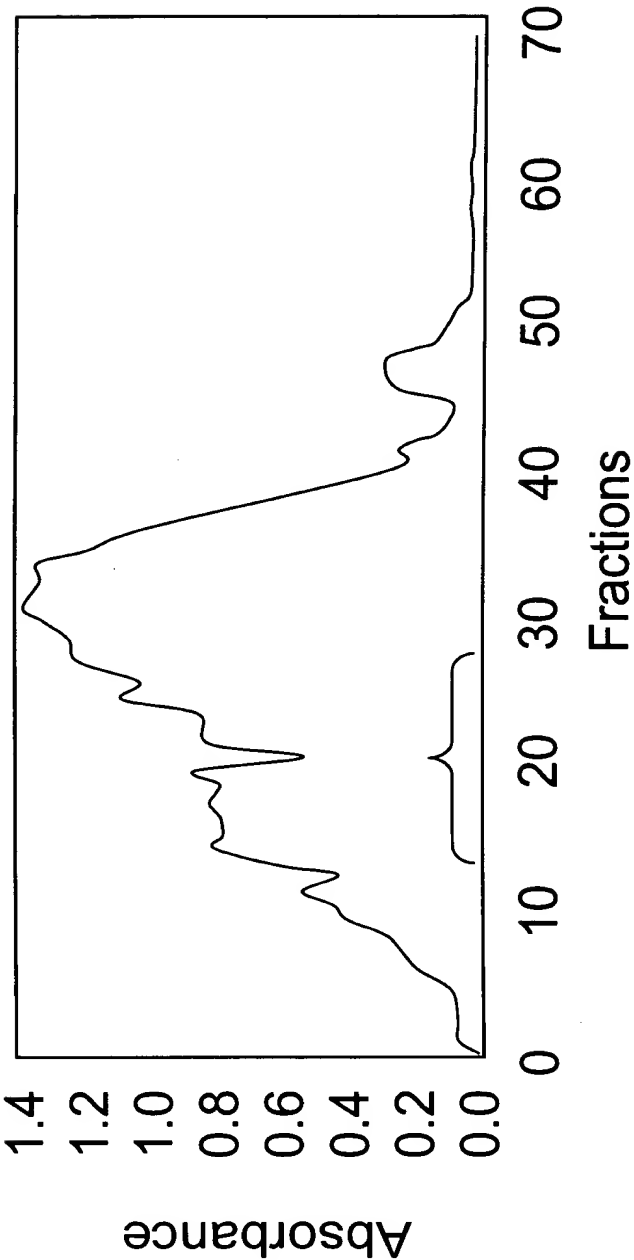


Fig. 10

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



Fig. 11



Fractions 14-28



Fig. 12

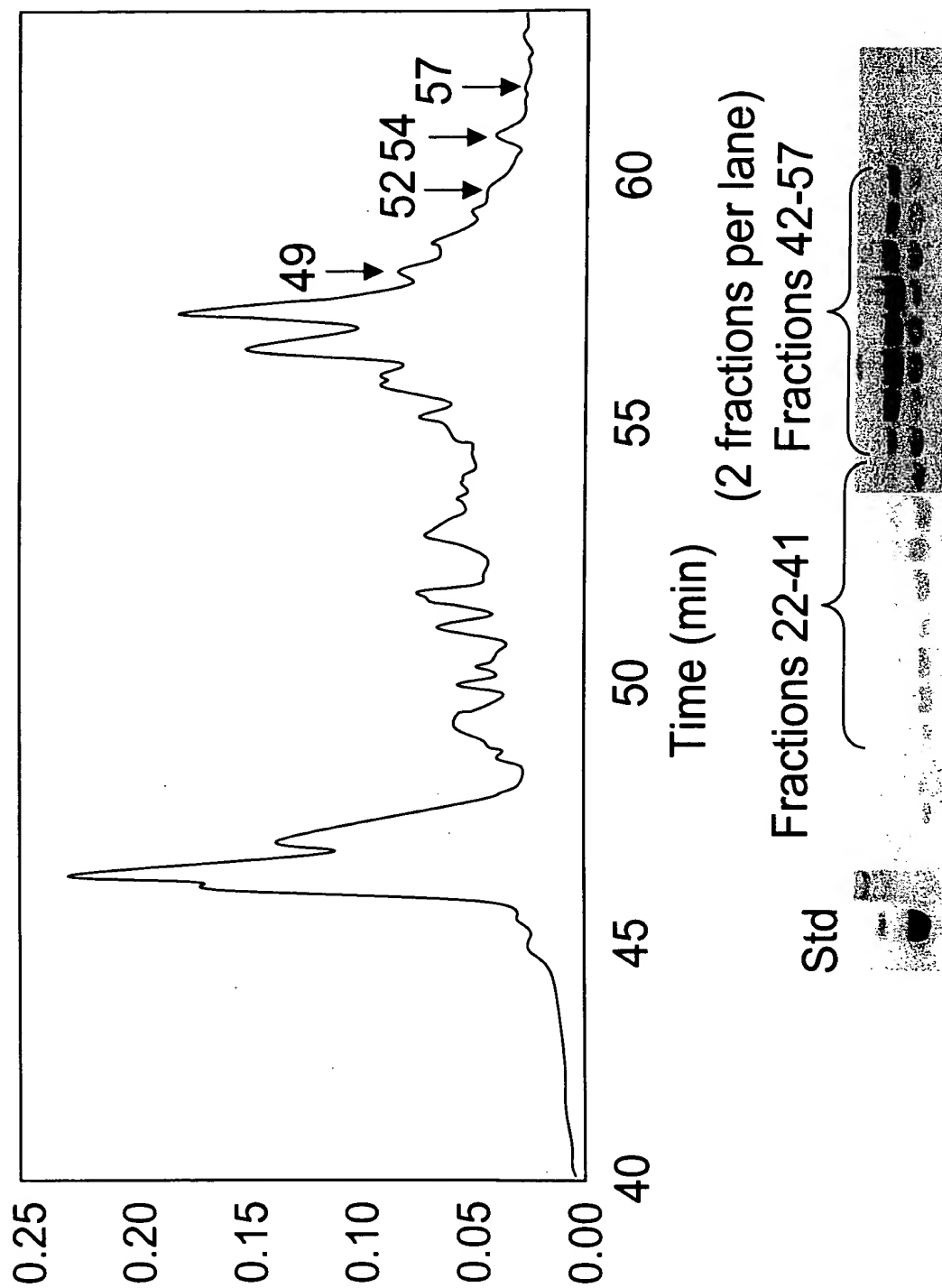


Fig. 13

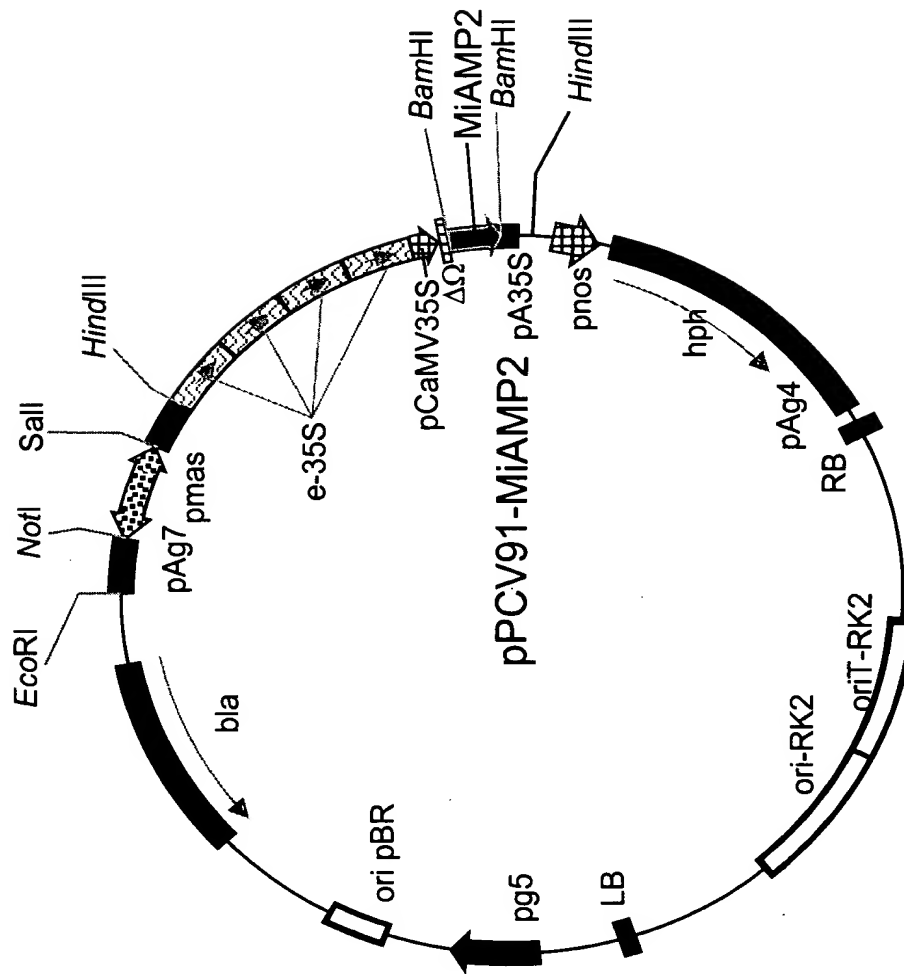


Fig. 14

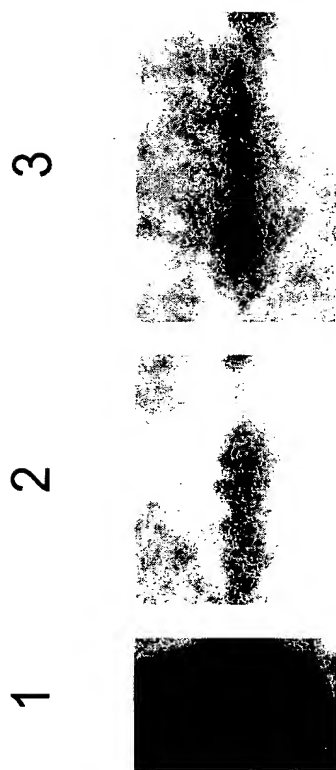


Fig. 15